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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.               | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------------|------------------|
| 10/674,198  | 09/29/2003  | James Patrick Clinch | 140/40652/O&T 975                 | 2676             |
| 279   | 7590        | 01/05/2006           |                                   |                  |
| TREXLER, BUSHNELL, GIANGIORGI,<br>BLACKSTONE & MARR, LTD.<br>105 WEST ADAMS STREET<br>SUITE 3600<br>CHICAGO, IL 60603 |             |                      | EXAMINER<br>MITCHELL, KATHERINE W |                  |
|   |             |                      | ART UNIT                          | PAPER NUMBER     |
|   |             |                      | 3677                              |                  |

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |  |                                      |  |
|------------------------------|--|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/674,198     | <b>Applicant(s)</b><br>CLINCH ET AL. |  |
|                              | <b>Examiner</b><br>Katherine W. Mitchell | <b>Art Unit</b><br>3677              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.135(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-20, 22-24, 26-30, 32-35, 37-42 and 44-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-47 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10-12, 19, 22-24, 26, 28-30, 32-35, 37-42, 48 and 51-54 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 13-18, 20, 27, 49, 50, 55 and 56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>→ 10/21/05 and 9/14/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

The request filed on 11/2/2005 for a Request for Continuing Examination (RCE) under 37 CFR 1.114 is acceptable and an RCE has been established. Any previous finality is hereby withdrawn and a new action on the merits follows. Any newly-submitted claims have been added. An action on the RCE follows.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3,5-7,10-12,19, 22, 24,26, 28, 29, 30, 32-35, 37-42, 48,and 51-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Tinnerman USP 2258342, hereafter called Tinnerman '342.

Re claims 1-3, 5-7, 10,11,12,19, 22, 24,26,28,29, 30, 32-35, 37-42 and 48:  
Tinnerman 342 in Figs 1-3 teaches a cage member and nut assembly, said nut (15) having a 1<sup>st</sup> and 2<sup>nd</sup> portion (see marked up drawings below) enclosed by a cage member (10/11) which has a body configured to engage the nut member such that the nut member is encaged. The cage further comprises a body (11/10), and "11" is considered the upper cage/arm portion, and "10" is the base. The wall is labeled by examiner in drawings below. The nut engagement is such that the 2<sup>nd</sup> portion (same as

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the portion labeled "1<sup>st</sup> plate" below - looking at the drawings as oriented, it is the "lower" part of nut below "11") of the nut does not come into contact with either the base or the wall. Figs 1 and 3 shows a limited range of motion in at least two dimensions. The body provides a limited range of nut movement in at least two dimensions (axially along what could be called the bolt axis or z-axis is one dimension of limited movement, the plane perpendicular to this, in the x-axis approximately on the surface of "11" -- see dotted lines added to figure 1 below). Examiner notes that the movement in the x dimension is very limited, but movement is allowed while the nut is still encaged.

Further Re claims 3 and 12: As shown in Fig 1, arm portion 11 forms two arm portions at the end as labeled by examiner in drawings below. These two arms are opposite each other.

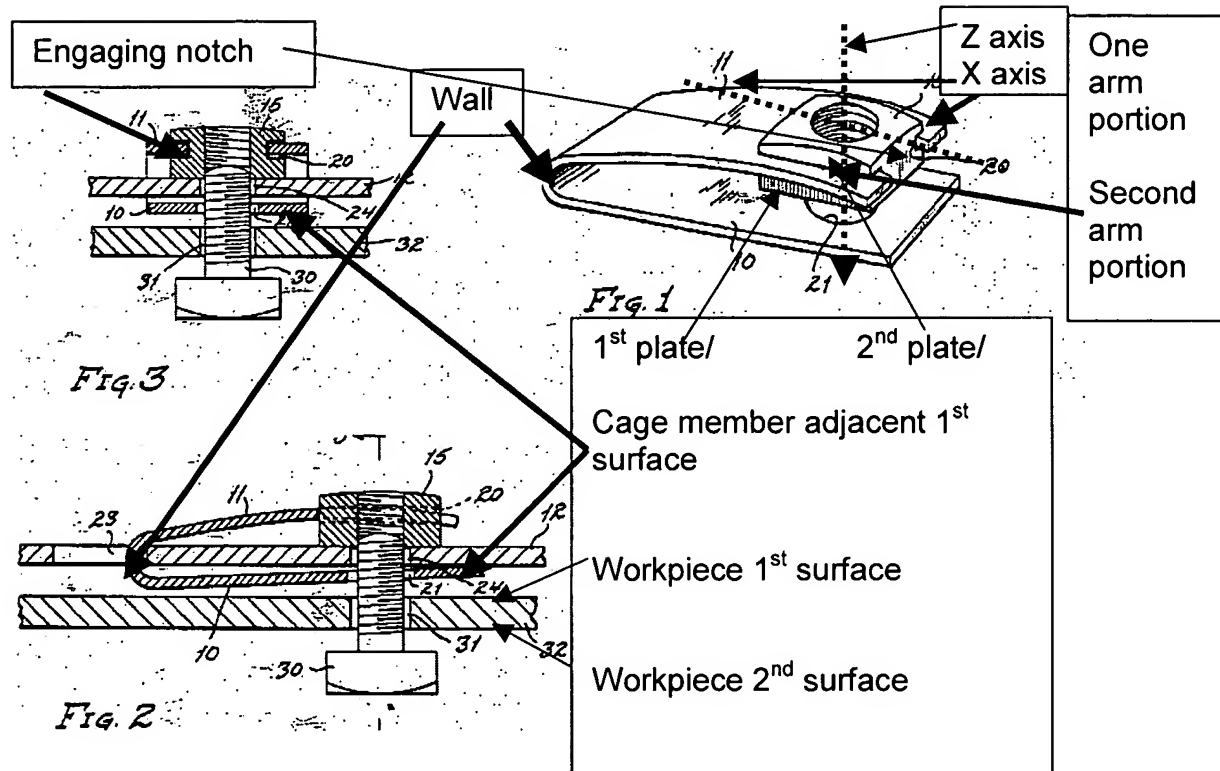
Further re claims 5-6: The arms are opposite each other and form an opening sized to receive the nut. The size is constant when the nut is encaged or not encaged. Each arm can be considered generally C shaped - the arms together form a C, and thus they are considered to each have a generally c-shaped portion (half of a C). These C-shaped portion are opposite each other and define said opening.

Further Re claims 7 and 19: The at least one arm 11 is inherently flexible - see col 1 lines 41-42 and line 27, and line 36 - sheet metal that can be bent is inherently flexible.

Further Re claims 22,24, and 29-30 and 34-35 and 39-42 and 48: Tinnerman '342 in Figs. 1-3 teaches a nut (15) enclosed by a cage member (10/11) which has a body configured to engage the nut member such that the nut member is encaged. (Fig

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1 and 2) "11" is considered the upper cage portion, and engaging notch (best shown in Fig 1 and 3) will inherently serve to suspend the nut off the base.



Further, the upper portion (arm 11) of said cage member is configured to engage said nut member 15 and is configured to be flexed downwardly by said nut member toward said base portion 10 in order to allow said nut member to directly contact said base portion (Fig 2), but not including piece 12. Examiner notes that applicant is claiming an apparatus "comprising", and Fig 2 shows every claimed structural limitation and is clearly **capable of** meeting the intended use of **configured to be** flexed downwardly to allow the nut to directly contact the base by merely omitting structure 12. Fig 2 shows the combination including

- Workpiece 32 having first and second surfaces and an aperture therethrough (31) the first surface is the “top” surface of 32 as shown in Fig 2. The second surface is the “bottom” surface as shown in Fig 2, which is directly adjacent bolt head)
- nut member 15 having an aperture (see Fig 1 showing threaded aperture extending at least partly through) and
- cage member (whole piece including 10/11) associated with said first surface of workpiece 32 ( Fig 2 and 3)
- a fastener (bolt 30 with enlarged head and elongated shank clearly shown in Fig 2, said enlarged head associated with 2<sup>nd</sup> surface of said workpiece and said shank in threaded engagement with said nut aperture).

Further Re claims 26, 28 and 48: Fig 1 and 3 show said nut with 1<sup>st</sup> plate and 2<sup>nd</sup> plate and a connecting member between said plates, each plate having an upper and lower surface, with aperture therethrough. The upper portion of cage comprises at least one arm extending from said base with said arm having an upper surface in contact with said lower surface of nut second plate (see marked up figures)

Further Re claim 24: Fig 2 shows said lower surface of said 1<sup>st</sup> plate interfacing with said cage member base. Interfacing, like connecting, does not require direct contact but can occur via an intermediate member.

Further Re claims 29-30, 34,35: Fig 1 shows a cage member suspending the nut off the base, and above the base, prior to said fastener being received in the nut aperture.

Further Re claims 39-42 and 48: the cage body has an upper portion (11) configured to engage the nut member such that said nut member is suspended. It is suspended both above the base portion 10 and from said upper portion 11.

Further Re claim 32,37: The body further comprises at least one wall (see label by examiner above), and Figs 1- 3 show the nut engaged such that the nut does not contact at least one wall.

Further Re claims 33,38: Said body comprises at least one arm 11 which serves to suspend said nut above said base. (Figs 1 and 3). Examiner notes that applicant did not require the arm to extend **directly** from said base - it extends from the wall which extends from the base, and thus is also considered to extend from the base.

Re claims 51,53: The arms portions extend indirectly from opposite sides of base portion.

Re claims 52,54: at least part of the arm portions (marked up Fig 1) are capable of independent movement relative to each other -pliers on the end of each arm could move them independently.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tinnerman '342 in view of Tinnerman USP 2303148, hereafter called '148. As

discussed above, '342 teaches all the elements except welding the cage member to the first surface of said workpiece. Tinnerman '148 teaches in page 2 col 1 lines 5-15 that welding is well known in the art of fastener connections. Tinnerman '148 features a temporary attachment means specifically to facilitate ease of reuse and removal. However, if a more permanent attachment was desired, '148 teaches that welding is well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made modify Tinnerman '342 to weld the cage member to the workpiece if a relatively permanent, rather than temporary, attachment is required.

#### ***Response to Arguments***

5. Applicant's arguments, filed 10/12/2005, with respect to Parkin have been fully considered and are persuasive. Parkin is clear that the nut is held against rotation. Examiner notes that Parkin discloses "resiliently held", but examiner agrees that the claims, read in light of applicant's specification and figures, are clear that "limited range of movement" would not encompass "resiliently held". The rejection has been withdrawn.

6. Applicant argues that Tinnerman 342 does not teach limited range of movement in two dimensions. Examiner disagrees. Applicant has agreed that Tinnerman allows limited movement in the Z dimension (bolt axis). Examiner notes that the nut is placed between the arms by sliding (the direction of sliding is considered the X direction - see marked up Fig 1 above); thus inherently there is a limited range of movement in the x dimension. There is an ample gap at the end to allow such motion while the nut remains encaged.



7. Applicant has amended claim 22 to require that the nut member be capable of direct contact with the base portion, but argues that the nut must directly contact the base. That direct contact is not claimed-- "configured to be flexed downwardly by said nut member toward said base portion in order to allow said nut member to directly contact said base portion" is claimed. In an apparatus claim, only structural limitations must be explicitly taught. Tinnerman 342's nut in Fig 1 and 2 is configured such that the upper portion of said cage member is **configured to be** flexed downwardly by said nut member toward said base portion in order to (capable of) allow said nut member to directly contact said base portion" if the member 12 were not there. Tinnerman 342, by teaching the structure of Fig 1 and 2, teaches the structure with "12" omitted. **It would allow** (as claimed) the nut member to directly contact the base portion.
8. Applicant argues claim 48 includes claim 11-13 and 27. It does not include the limitations of at least claim 13.

***Allowable Subject Matter***

9. Claims 44-47 are allowed.
10. Claims 4,8,13-18,20, 27 and 49,50,55, and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The indicated allowability of claim 26 and thus claim 48 is withdrawn as the structure is clearly taught in Tinnerman 342. The indicated allowability was an oversight. Rejections based on the newly cited reference(s) follow.

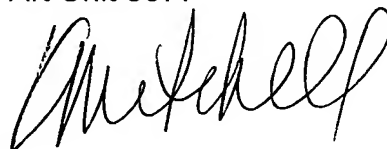
**Conclusion**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell  
Primary Examiner  
Art Unit 3677



Kwm  
12/29/2005